

# Notice of Allowability

Application No.

09/727,534

Examiner

Tony Mahmoudi

Applicant(s)

NADJ ET AL.

Art Unit

2165

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 06-May-2005.
2. ☒ The allowed claim(s) is/are 8-19, re-numbered as claims 1-12.
3. ☒ The drawings filed on 28 November 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

JEFFREY GAFFIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

## DETAILED ACTION

### *Remarks*

1. In response to the amendment filed on 06-May-2005, claims 1-7 are canceled and new claims 8-19 are added per applicant's request. Therefore, claims 8-19 are pending in the application, of which, claims 8 and 14 are presented in independent form.

### *Allowance*

2. Claims 8-19 are allowed over the prior art made of record.
3. The following is an examiner's statement of reasons for allowance:

The applicant's amendment filed on 06-May-2005 has overcome the previous rejections made under U.S. C. § 112, 101 and the cited prior art with respect to the independent claims 8 and 14.

The prior art of record, Rathbun (U.S. Patent No. 6,138,123), Sun et al (U.S. Patent No. 6,442,663), Carr et al (U.S. Patent No. 6,449,214), and Carr (U.S. Publication No. 2004/0167923 A1) do not disclose, teach, or suggest the claimed limitations of (in combination with all other features in the claim):

sharing a single pointer referencing a lower level of node groups, each of the lower level node groups being stored contiguously; and

performing a mixture of insert, remove, or swap operations on the heap data structure without stalling a pipeline performing the operations, as claimed in independent claims 8 and 14.

Claims 9-13 are allowed over the prior art made of record because they are dependents from the allowed independent claim 8.

Claims 15-19 are allowed over the prior art made of record because they are dependents from the allowed independent claim 14.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of art with respect to data processing within heap data structures in general:

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Patent/Pub. No.	Issued to	Cited for teaching
US006442663B1	Sun et al.	Collecting memory contents of a process of data collection.
US006449214B1	Carr et al.	Statistic counters and heap data structures.
US 20040167923A1	Carr	Communication network data structure with pointers.

5. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Tony Mahmoudi whose telephone number is (571) 272-4078. The examiner can normally be reached on Mondays-Fridays from 08:00 am to 04:30 pm.

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July 13, 2005